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| 09/851,757 | 05/08/2001 | Rajeev Sethia | VLSI-3512 | 3873 |

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EXAMINER

LIPMAN, JACOB

ART UNIT PAPER NUMBER

2134

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,757

Applicant(s)

SETHIA ET AL.

Examiner

Jacob Lipman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 9-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9 September 2005.

Drawings

2. Figure 1A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 175. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if

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only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informality:

Page 7 recites "word from the he opposing". The word "he" appears to be a typo. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Appropriate correction is required.

Claim Objections

5. There are two claims with identical numbers in the application. 37 CFR 1.126 requires the original numbering of the claims to be preserved throughout the prosecution, therefor, misnumbered claim 3(b) has been renumbered 26.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 2-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "each ... overtime" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "a set of random digital values" in lines 1-2. It is unclear if this refers to the same values recited in claim 2.

Claim 3 recites the limitation "said column strong driver signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "said row strong driver signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "said register file" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "said register file" in line 1. There is insufficient antecedent basis for this limitation in the claim.

The term "significant" in claim 4 is a relative term which renders the claim indefinite. The term "significant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claim 4, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

See MPEP § 2173.05(d).

Claim 6 recites the limitation "said column strong driver" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "wherein said programmable column word constructor and said programmable column word constructor " in lines 1-3. Both elements are identical. There seems to be a typo in this claim, and it is unclear what is intended.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by applicant's admitted prior art.

Claim 1 describes the keyboard that applicant describes as background.

Applicant's proposed improvement to the known keyboard seems to be claimed in claim 2.

10. Claim 1-7 and 26, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Frielink, USPN 4,926,173.

With regard to claim 1, Frielink discloses a keypad security circuit (column 1 lines 6-12) including a comparator adapted to perform a bit wise comparison of a driver signal and a resulting signal (column 4 lines 13-37), a column output driver coupled to the comparator adapted to drive a keypad strong signal on a column, a row output driver

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coupled to the comparator adapted to drive a keypad strong driver signal on a row (column 2 lines 54-68), a programmable column word constructor coupled to the row output driver adapted to provide a weak driver signal on a column (column 4 lines 38-49), and a programmable row word constructor coupled to the column output driver adapted to provide a weak driver signal on the row (column 4 lines 24-37).

With regard to claim 2, Frielink discloses a keyboard (column 2 lines 53-68) where a set of digital values varies (column 1 lines 36-41).

With regard to claim 3, Frielink discloses the random values are sent to the rows and columns (column 1 lines 36-66) from a register file (output lines, column 3 lines 29-30).

With regard to claim 4, Frielink discloses the random number generator generates patterns depending on the time, and thus changes over time (column 3 lines 25-28).

With regard to claim 5, Frielink discloses weak driver signals are changed on each row and column (column 4 lines 13-49).

With regard to claims 6, 7, and 26, Frielink discloses the bits comprising a 10, 01, or 11 (column 4 lines 35-38)

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 8, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Frielink in view of Valdenaire, USPN 5,677,687.

With regard to claim 8, Frielink discloses the limitations of claim 2, as outlined above. Frielink discloses a pull up (column 5 lines 35-40), but does not specifically disclose having a pull-down. Valdenaire discloses that keyboards often have pull-up and pull-down resistors (Figure 1, column 2 lines 45-46). It would have been obvious for one of ordinary skill in the art to use the output-randomizing keyboard of Frielink on the pull-up/pull-down keyboard of Valdenaire to increase security and prevent eavesdropping (Frielink, column 2 lines 2-5).

Conclusion


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Lipman whose telephone number is 571-272-3837. The examiner can normally be reached on M-Th 7 AM-3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on 571-272-3838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JL


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